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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,869	08/25/2003	Kang-hcuy Lee	1293.1837	1669

21171 7590 10/17/2006

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EXAMINER

BODDIE, WILLIAM

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,869

Applicant(s)

LEE, KANG-HEUY

Examiner

William Boddie

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. In an amendment dated, September 28<sup>th</sup>, 2006, the Applicant amended claims 1, 13 and 20-21. The Applicant also cancelled claims 7 and 18. Currently claims 1-6, 8-17, and 19-21 are pending.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-6, 8-17 and 19-21 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's argument that Ohyama's menu key is prevalent on most modern audio visual equipment and as such should be considered a major function is not persuasive. It is clear from Ohyama's disclosure that pressing the menu button allows access to additional functions (i.e. closed captioning, timer setup), while the main functions of volume and channel, for example, are given buttons on the remote in figure 21. This access to additional (less frequently used) functions clearly fulfills the limitations of the claims calling for an additional function information button.

### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities: in the newly added limitations on line 13 of claim 1, the claim reads, "and *controls* a function corresponding to a major function information." The language used in this phrase is different from the previously cited controller actions which call for the "controlling" of an additional function on lines 8-9. This is incorrect grammatically. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

Art Unit: 2629

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Ohyama et al. (US 5,751,373).

**With respect to claim 21**, Ohyama discloses, an apparatus controlling functions of an image processing apparatus using a remote control, the apparatus comprising:

a controller (11 in fig. 1),

differentiating between major functions and additional functions in response to receiving a signal from the remote control (S1 in fig. 2a, also see col. 6, lines 49-53), and

causing additional function information to be displayed (fig. 15 for example), and

causing an additional function that is selected based on the displayed additional function information to be performed (col.12, lines 61-67), if a remote control signal received via the remote control is a signal for requesting the additional function information, and controls a function corresponding to a major function information to be performed if the remote control signal is the major function information (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel); and

a display unit (4 in fig. 1) displaying the additional function information controlled by the controller (col. 5, lines 61-67).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6, 8-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyama et al. (US 5,751,373) in view of Song (US 5,691,778).

**With respect to claim 1**, Ohyama discloses, an apparatus for controlling functions of an image processing apparatus using a remote control (20-23 and 2 in fig. 1), the apparatus comprising:

a remote control signal receiver (13 in fig. 1) receiving a remote control signal output from the remote control (col. 5, lines 66-67);

a memory unit storing code information corresponding to the remote control signal and additional function information of the image processing apparatus (12 and 16-19 in fig. 1, col. 5, lines 61-65);

a controller controlling the additional function information stored in the memory unit to be displayed (11 in fig. 1, col. 5, lines 61-65) and controlling an additional function that is selected based on the displayed additional function information to be performed (col. 12, lines 61-67), if the remote control signal received via the remote control signal receiver is a signal for requesting the additional function information (23 in

fig. 1; also see S1 and S2 in fig. 2A), and controls a function corresponding to a major function information to be performed if the remote control signal is the major function information (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel); and

a display unit (4 in fig. 1) displaying the additional function information controlled by the controller (clear from fig. 7, for example).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information.

Song discloses, that the frequently used input keys (channel up/down, volume up/down, fig. 6a) can be used under normal conditions. However, when the graphic-remote controller key (additional information key) is operated numerous less frequently used functions (fast-rewind, multiple voice, see fig. 6b) are easily accessible to the user via interaction with the graphical interface on screen (col. 2, lines 35-45, also see fig. 6a-b).

Ohyama and Song are analogous art because they are both from the same field of endeavor namely, remote controls with access to on screen display controls.

At the time of the invention it would have been obvious to one of ordinary skill in the art to categorize the functions of Ohyama, as additional or major according to the frequency of use as taught by Song.

The motivation for doing so would have been to simplify the remote control interface and thus make it more convenient to use (Song, col. 2, lines 32-33).

Therefore it would have been obvious to combine Song with Ohyama for the benefit of a more convenient and simplified remote control to obtain the invention as specified in claim 1.

**With respect to claim 2**, Ohyama and Song disclose, the apparatus of claim 1 (see above)

Ohyama further discloses, comprising an on-screen-display (OSD) processor (5 in fig. 1), controlled by the controller (fig. 1, col. 5, lines 61-67), generating OSD data corresponding to the additional function information and outputting the OSD data to the display unit (OSD RGB signal in fig. 1, col. 8, lines 39-42).

**With respect to claim 3**, Ohyama and Song disclose, the apparatus of claim 2 (see above).

Ohyama further discloses, wherein the OSD data (OSD RGB signal in fig. 1, col. 8, lines 39-42) is processed by an existing OSD processing circuit (5 in fig. 1) in the image processing apparatus.

**With respect to claim 4**, Ohyama and Song disclose, the apparatus of claim 1 (see above).

Ohyama further discloses, wherein in response to the controller receiving a selection signal corresponding to desired additional function information (note step S9 in fig. 2C), the controller marks the desired additional function information selected among the displayed additional function information (note color changes and location of cursor that mark the additional information selected from fig. 7 to fig. 8).

**With respect to claim 5**, Ohyama and Song disclose, the apparatus of claim 4 (see above).

Ohyama further discloses, wherein the controller marks the desired additional function information selected by making the desired information darker or lighter than unselected additional function information (see figs. 6c and 7 for example).

**With respect to claim 6**, Ohyama and Song disclose, the apparatus of claim 4 (see above).

Ohyama further discloses, wherein the controller marks the desired additional function information selected by making the desired information a different color than unselected additional function information (see figs. 6c and 7 for example, a different shade, lighter or darker, is a different color).

**With respect to claim 8**, Ohyama and Song disclose, the apparatus of claim 1 (see above).

Ohyama further discloses, wherein the apparatus comprises an infrared ray receiving circuit (col. 15, lines 30-33).

**With respect to claim 9**, Ohyama and Song disclose, the apparatus of claim 8 (see above).

Ohyama further discloses, wherein the remote control comprises an infrared ray transmitting circuit (col. 15 lines 30-33, 101 and 207 in fig. 20).

**With respect to claim 10**, Ohyama and Song disclose, the apparatus of claim 1 (see above).



Ohyama further discloses, wherein the additional function information (for example fig. 14, hue, color, brightness) is modified without modifying the remote control (the display characteristics are altered without altering the remote, fig. 14).

**With respect to claim 11**, Ohyama discloses, the apparatus of claim 1 (see above).

Ohyama further discloses, further comprising directional keys provided on the remote control (20, 21 in fig. 1), with which a user selects from the displayed additional function information (col. 7, lines 45-56).

**With respect to claim 12**, Ohyama and Song disclose, the apparatus of claim 11 (see above).

Ohyama further discloses, further comprising a selection button (22 in fig. 1) provided along with the directional keys.

**With respect to claim 13**, Ohyama discloses, a method of controlling the functions of an image processing apparatus using a remote control, the method comprising:

parsing a received remote control signal received from the remote control (col. 15, lines 30-33);

displaying information for available additional functions on the image processing apparatus if the remote control signal contains a request for displaying information of additional functions (fig. 12 for example, also see S2 in fig. 2a);

performing a function (col.12, lines 61-67) of the image processing apparatus which corresponds to a selection signal in response to the selection signal being

Art Unit: 2629

received from the remote control while the additional function information is displayed;  
and

and performing a function of the image processing apparatus which corresponds to the received remote control signal if the remote control signal is not requested for displaying the information of additional function (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information.

Song discloses, that the frequently used input keys (channel up/down, volume up/down, fig. 6a) can be used under normal conditions. However, when the graphic-remote controller key (additional information key) is operated numerous less frequently used functions (fast-rewind, multiple voice, see fig. 6b) are easily accessible to the user via interaction with the graphical interface on screen (col. 2, lines 35-45, also see fig. 6a-b).

At the time of the invention it would have been obvious to one of ordinary skill in the art to categorize the functions of Ohyama, as additional or major according to the frequency of use as taught by Song.

The motivation for doing so would have been to simplify the remote control interface and thus make it more convenient to use (Song, col. 2, lines 32-33).

Therefore it would have been obvious to combine Song with Ohyama for the benefit of a more convenient and simplified remote control to obtain the invention as specified in claim 13.

**With respect to claim 14**, Ohyama and Song disclose, the method of claim 13 (see above).

Ohyama further discloses, wherein the additional function information is displayed as OSD data (OSD RGB signal in fig. 1).

**With respect to claim 15**, Ohyama and Song disclose, the method of claim 13 (see above).

Ohyama further discloses, wherein in response to receiving position information for selecting desired additional function information among the additional function information displayed (16 in fig. 1 for example), a position for the selected additional function information is marked on the displayed additional function information so that a user can perceive the selected additional function information (note the highlighting that occurs when the cursor is placed in a different position from fig. 7 to fig. 8).

**With respect to claim 16**, Ohyama and Song disclose, the method of claim 15 (see above).

Ohyama further discloses, wherein the selected additional function information is marked by making it darker or lighter than remaining displayed additional function information (see highlighting in figs. 7 and 8 for example).

**With respect to claim 17**, Ohyama and Song disclose, the method of claim 15 (see above).

Ohyama further discloses, wherein the selected additional function information is marked by making it a different color than remaining displayed additional function information (see figs. 6c and 7 for example, a different shade, lighter or darker, is a different color).

**With respect to claim 19**, Ohyama and Song disclose, the method of claim 13 (see above).

Ohyama further discloses, wherein the parsing of the received remote control signal comprises differentiating between major functions and the available additional functions (S1 in fig. 2A, also col. 6, lines 49-53).

**With respect to claim 20**, Ohyama discloses, an image processing system comprising:

- a remote control (fig. 17); a remote control signal receiver receiving a remote control signal output from the remote control (13 in fig. 1);

- a memory unit storing code information corresponding to the remote control signal and additional function information of the image processing system (12, 16-18 in fig. 1; col. 5, lines 61-65);

- a controller controlling the additional function information stored in the memory unit to be displayed and controlling an additional function that is selected based on the displayed additional function information to be performed (11 in fig. 1, col. 12, lines 61-67), if the remote control signal received via the remote control signal receiver is a signal for requesting the additional function information (23 in fig. 1; also see S1 and S2 in fig. 2A), and controls a function corresponding to a major function information to be

performed if the remote control signal is the major function information (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel); and

a display unit displaying the additional function information controlled by the controller (4 in fig. 1, for example).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information.

Song discloses, that the frequently used input keys (channel up/down, volume up/down, fig. 6a) can be used under normal conditions. However, when the graphic-remote controller key (additional information key) is operated numerous less frequently used functions (fast-rewind, multiple voice, see fig. 6b) are easily accessible to the user via interaction with the graphical interface on screen (col. 2, lines 35-45, also see fig. 6a-b).

At the time of the invention it would have been obvious to one of ordinary skill in the art to categorize the functions of Ohyama, as additional or major according to the frequency of use as taught by Song.

The motivation for doing so would have been to simplify the remote control interface and thus make it more convenient to use (Song, col. 2, lines 32-33).

Therefore it would have been obvious to combine Song with Ohyama for the benefit of a more convenient and simplified remote control to obtain the invention as specified in claim 20.

**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Will Boddie whose telephone number is (571) 272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

wlb  
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AMR A. AWAD  
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Amr A. Awad', with a large, sweeping flourish at the end.